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(54) **COAXIAL CABLE CONNECTOR WITH INTEGRAL CONTINUITY CONTACTING PORTION**

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This patent is subject to a terminal disclaimer.

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See application file for complete search history.

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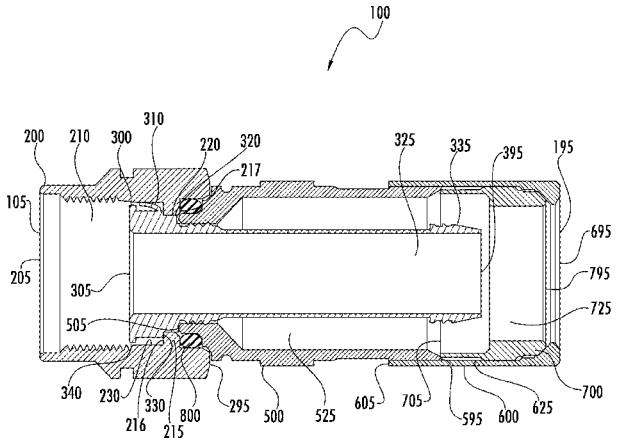
(57) **ABSTRACT**

A coaxial cable connector for coupling an end of a coaxial cable to a terminal is disclosed. The connector has a coupler adapted to couple the connector to a terminal, a body assembled with the coupler and a post assembled with the coupler and the body. The post is adapted to receive an end of a coaxial cable. The coupler, the body or the post has an integral, monolithic contacting portion. When the connector is coupled to the terminal and a coaxial cable is received by the body, the contacting portion provides for electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal other than by a separate component. The contacting portion is formable and forms to a contour of at least one of the body and the coupler when the body at least partially assembles with the coupler.

28 Claims, 14 Drawing Sheets



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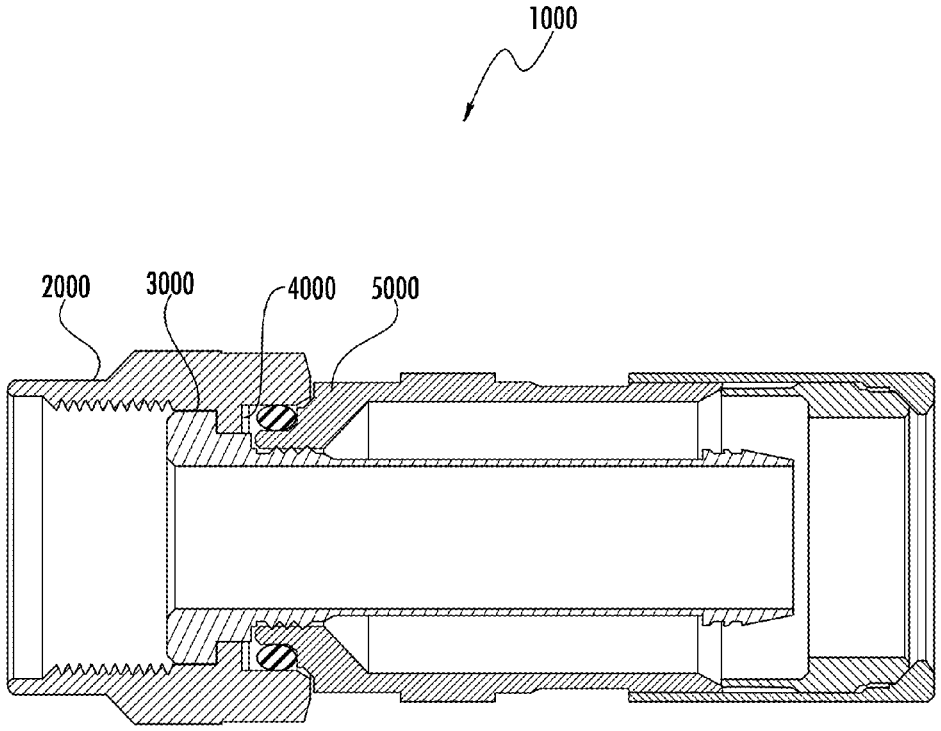

FIG. 1
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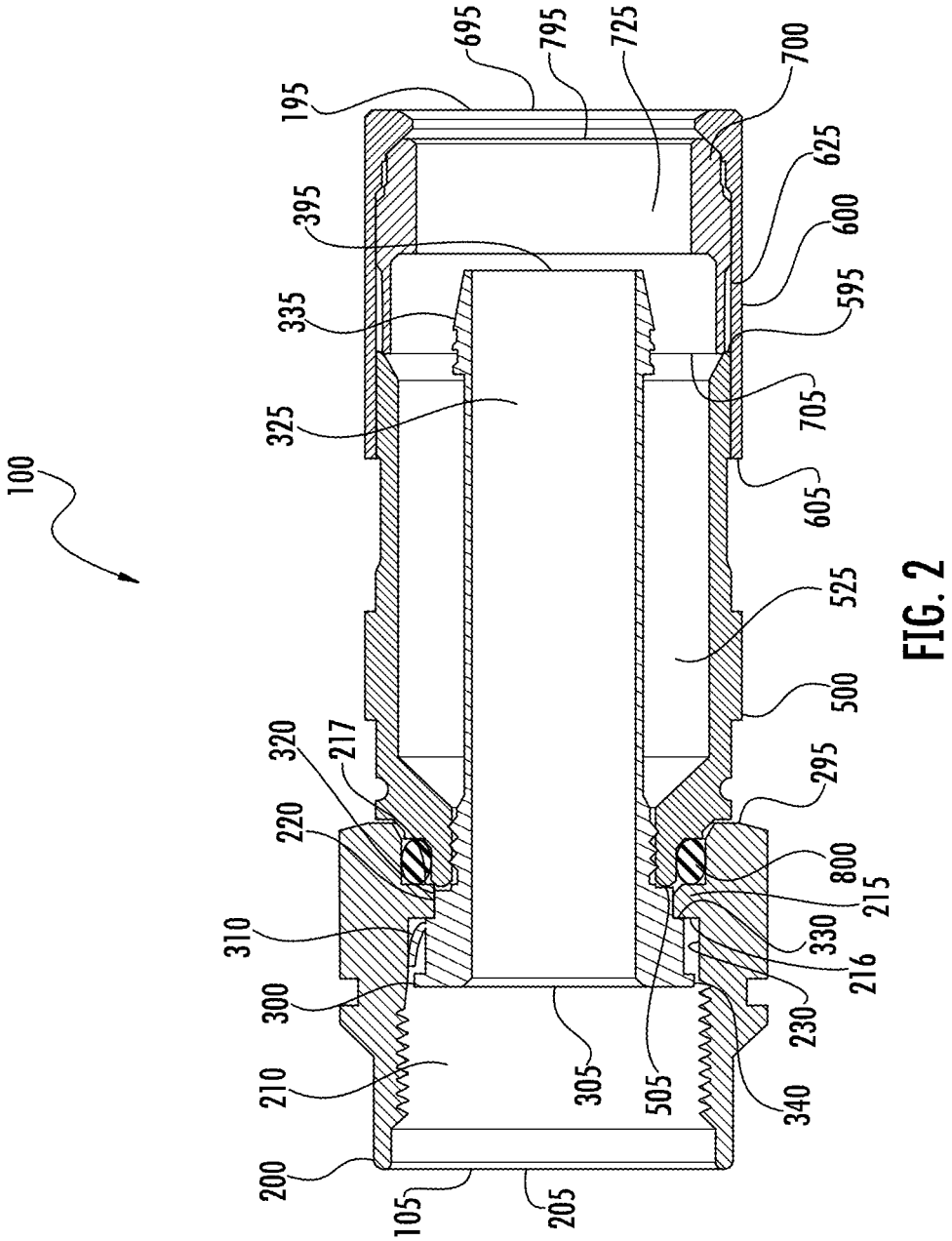
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FIG. 2

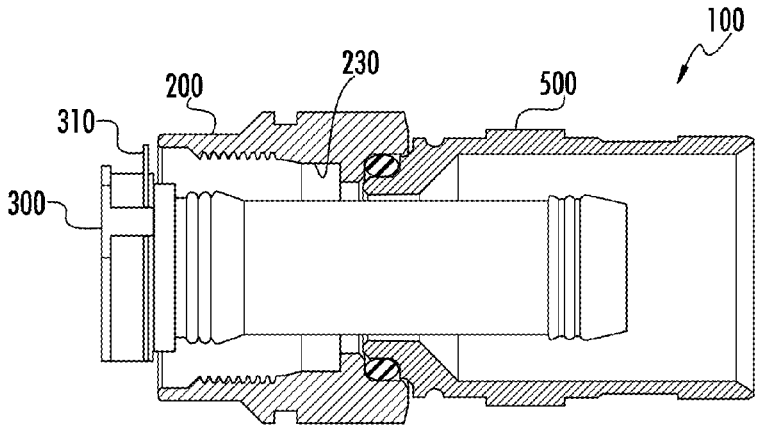

FIG. 3A

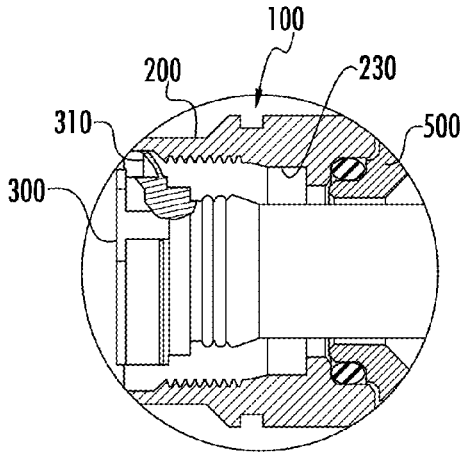

FIG. 3B

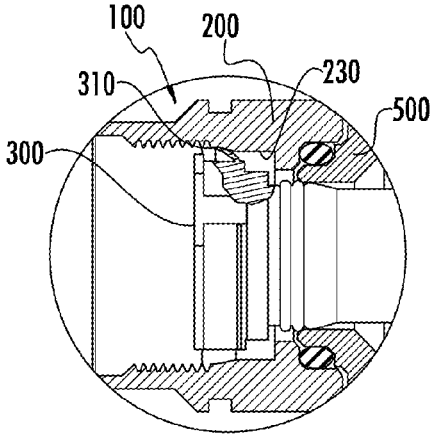

FIG. 3C

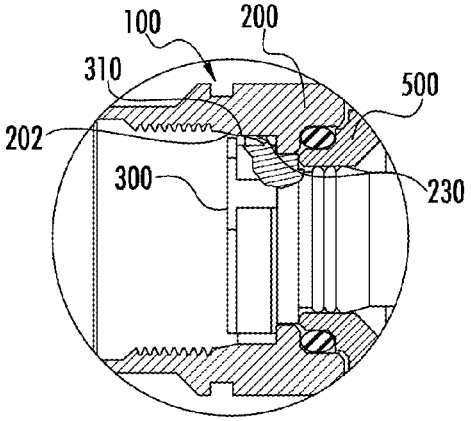

FIG. 3D

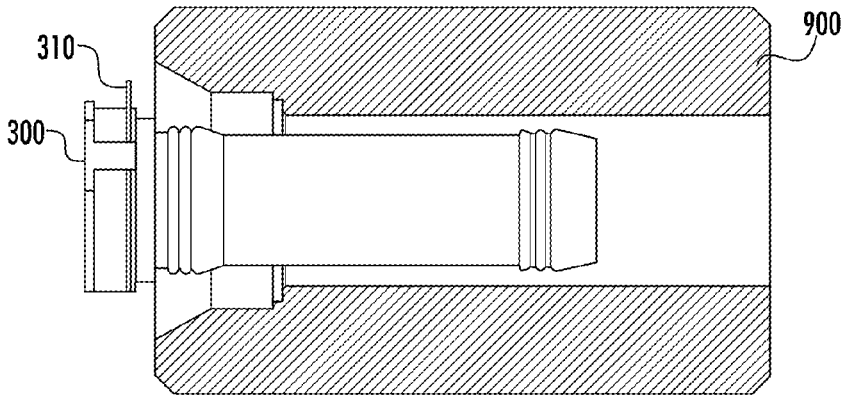

FIG. 4A

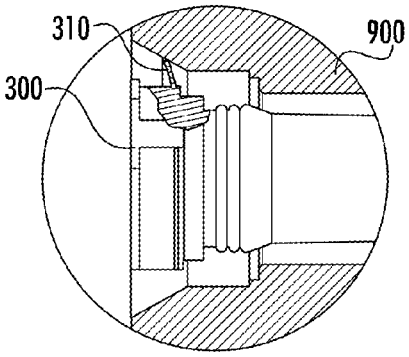

FIG. 4B

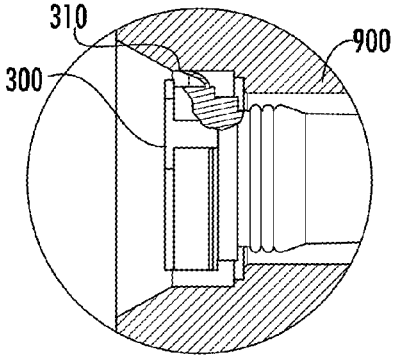

FIG. 4C

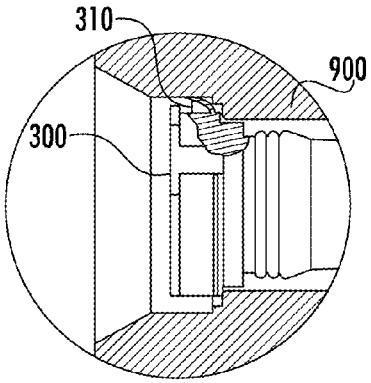

FIG. 4D

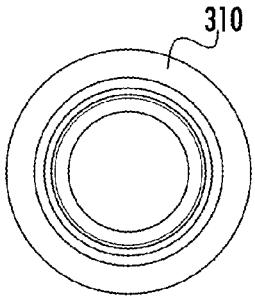

FIG. 5B

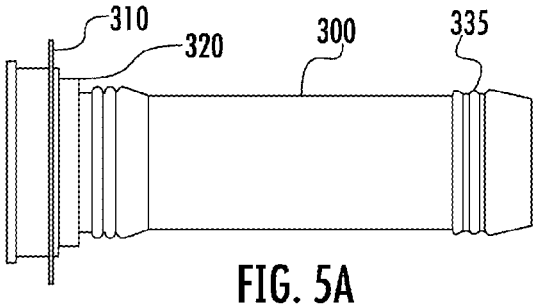

FIG. 5A

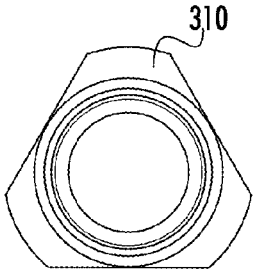

FIG. 5D

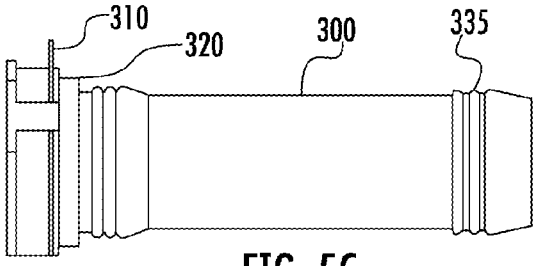

FIG. 5C

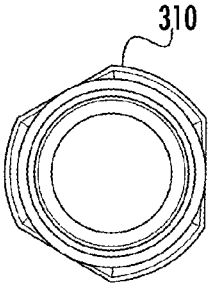

FIG. 5F

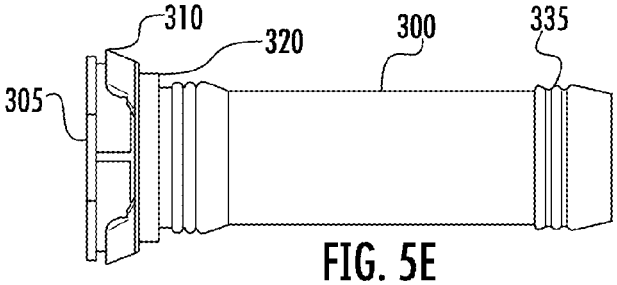

FIG. 5E

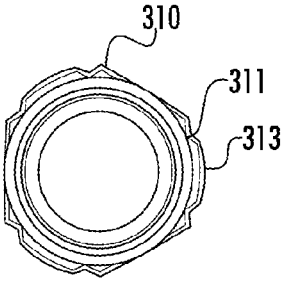

FIG. 5H

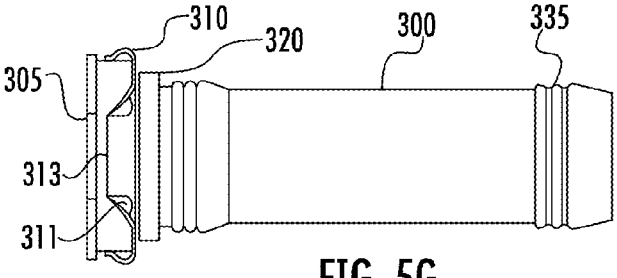

FIG. 5G

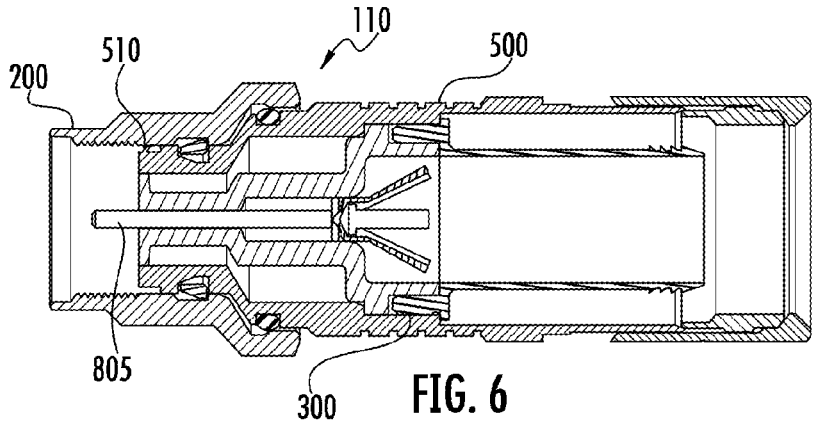

FIG. 6

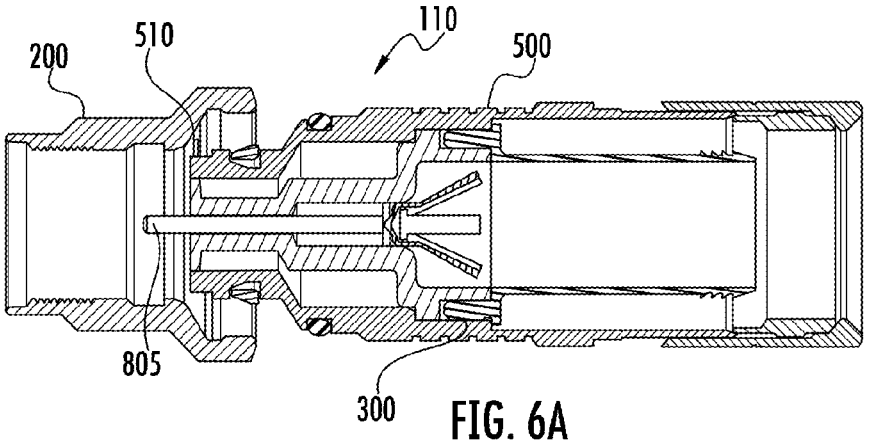

FIG. 6A

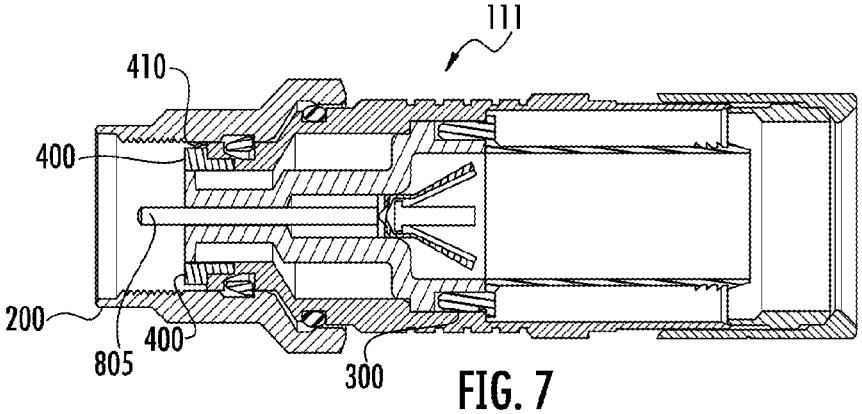

FIG. 7

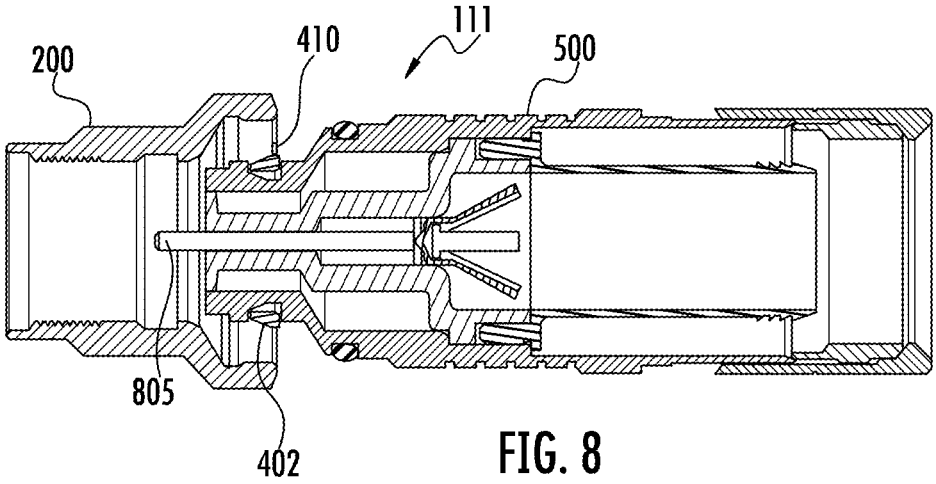

FIG. 8

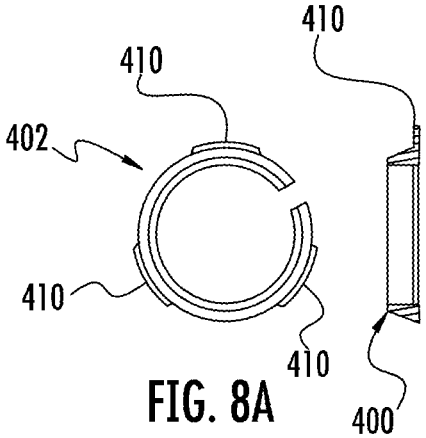

FIG. 8A

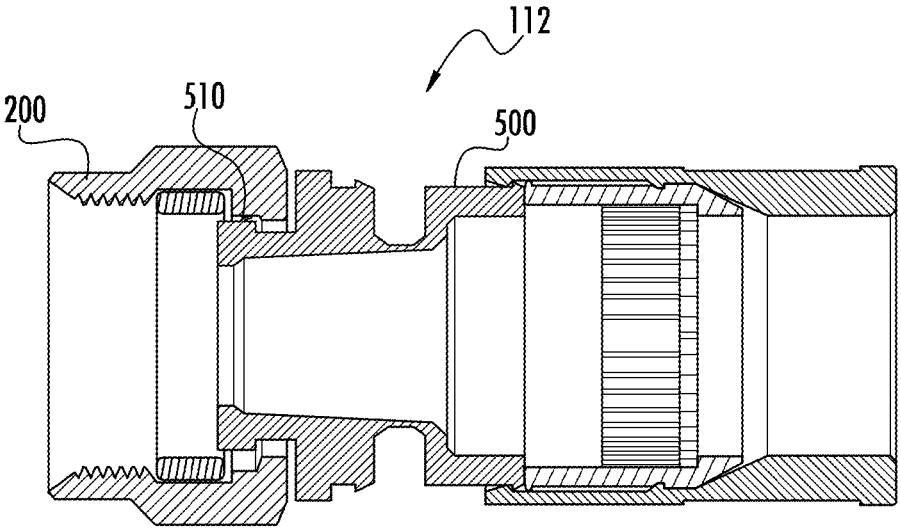

FIG. 9

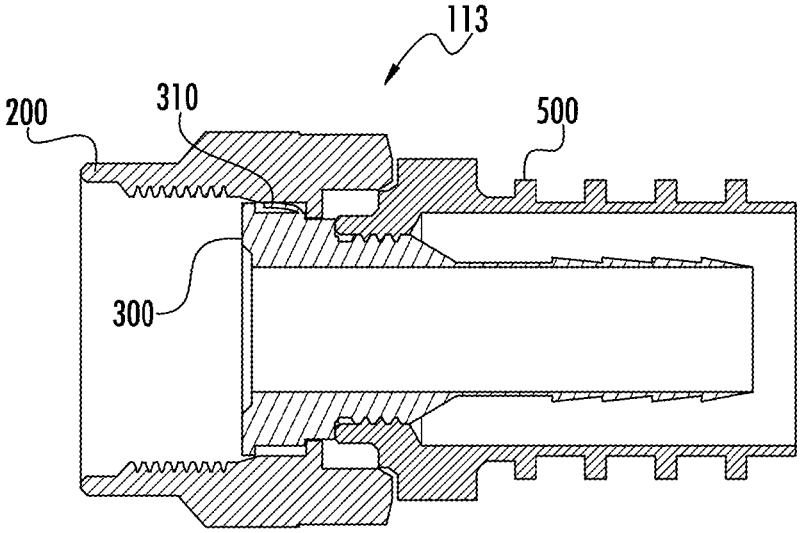

FIG. 10

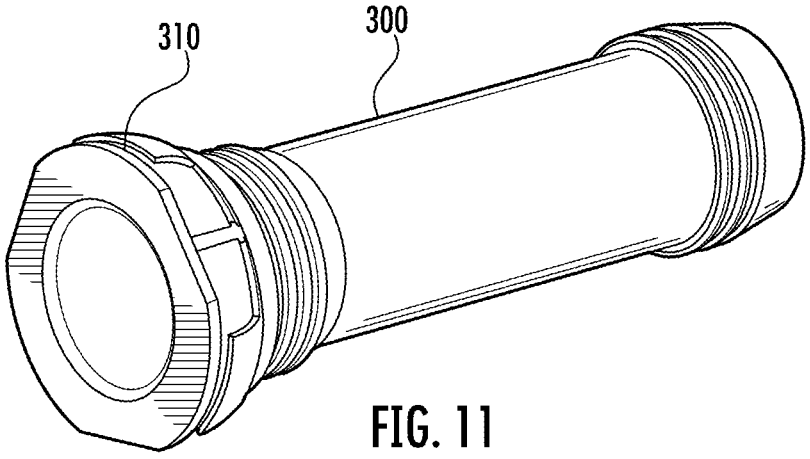

FIG. 11

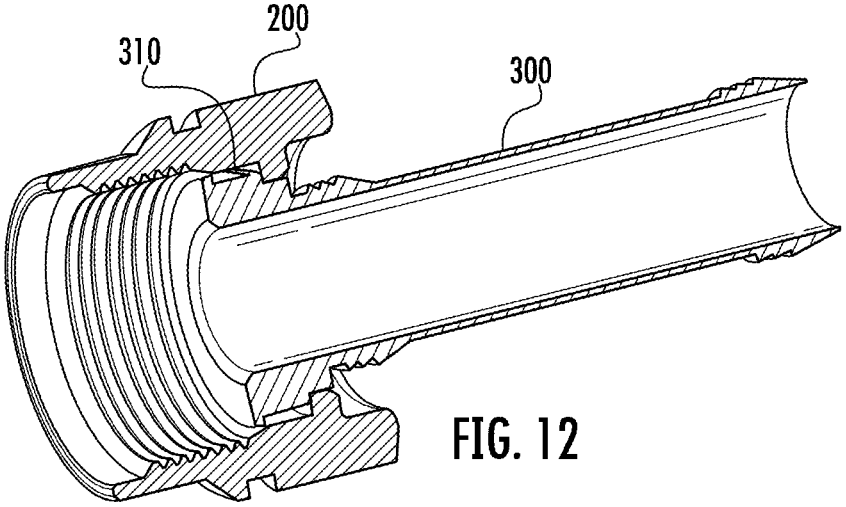

FIG. 12

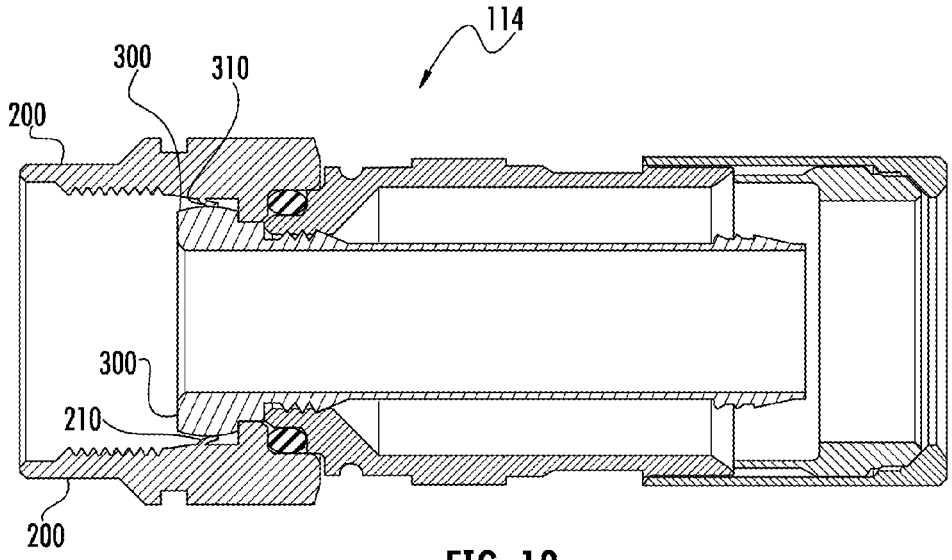

FIG. 13

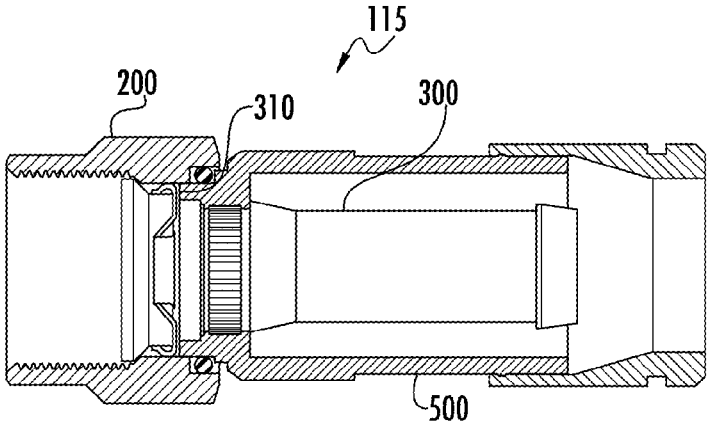

FIG. 14

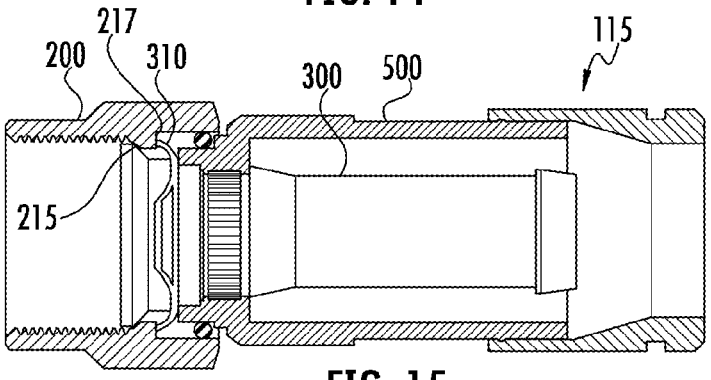

FIG. 15

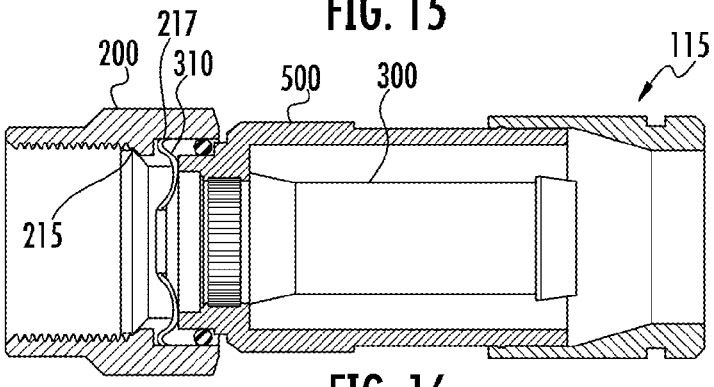

FIG. 16

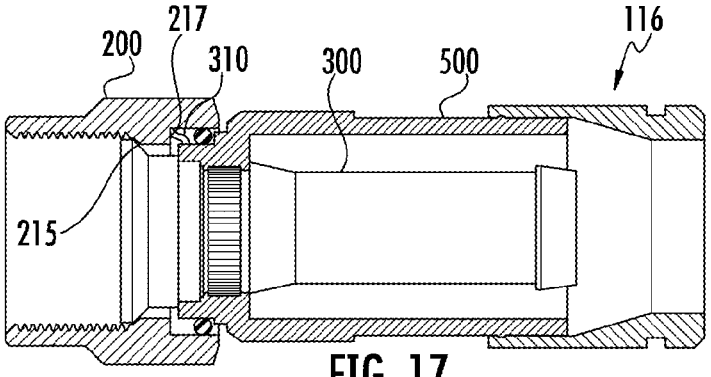

FIG. 17

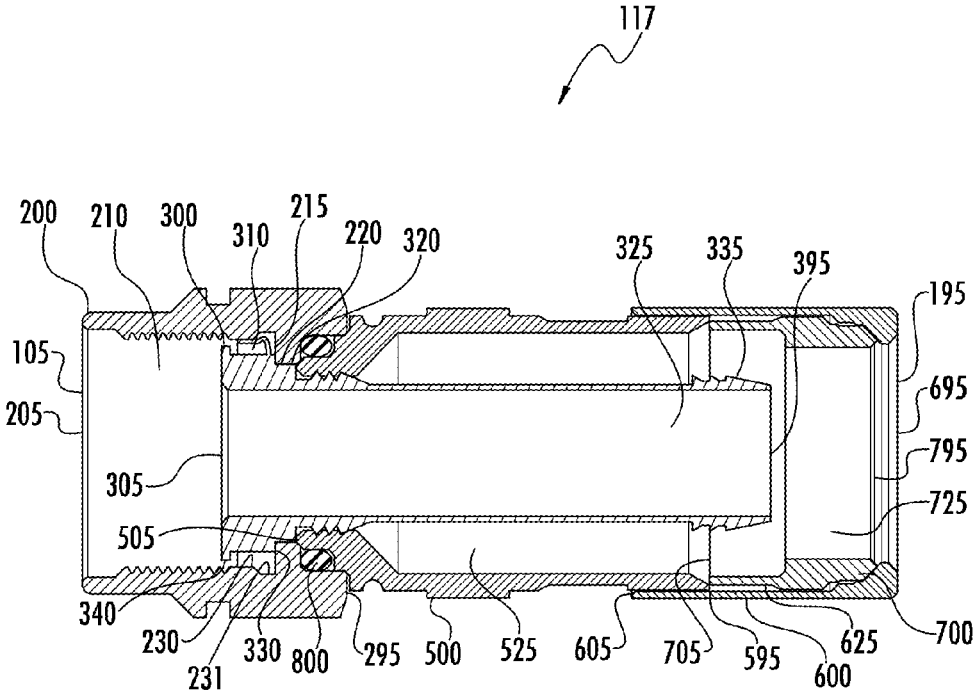
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FIG. 18

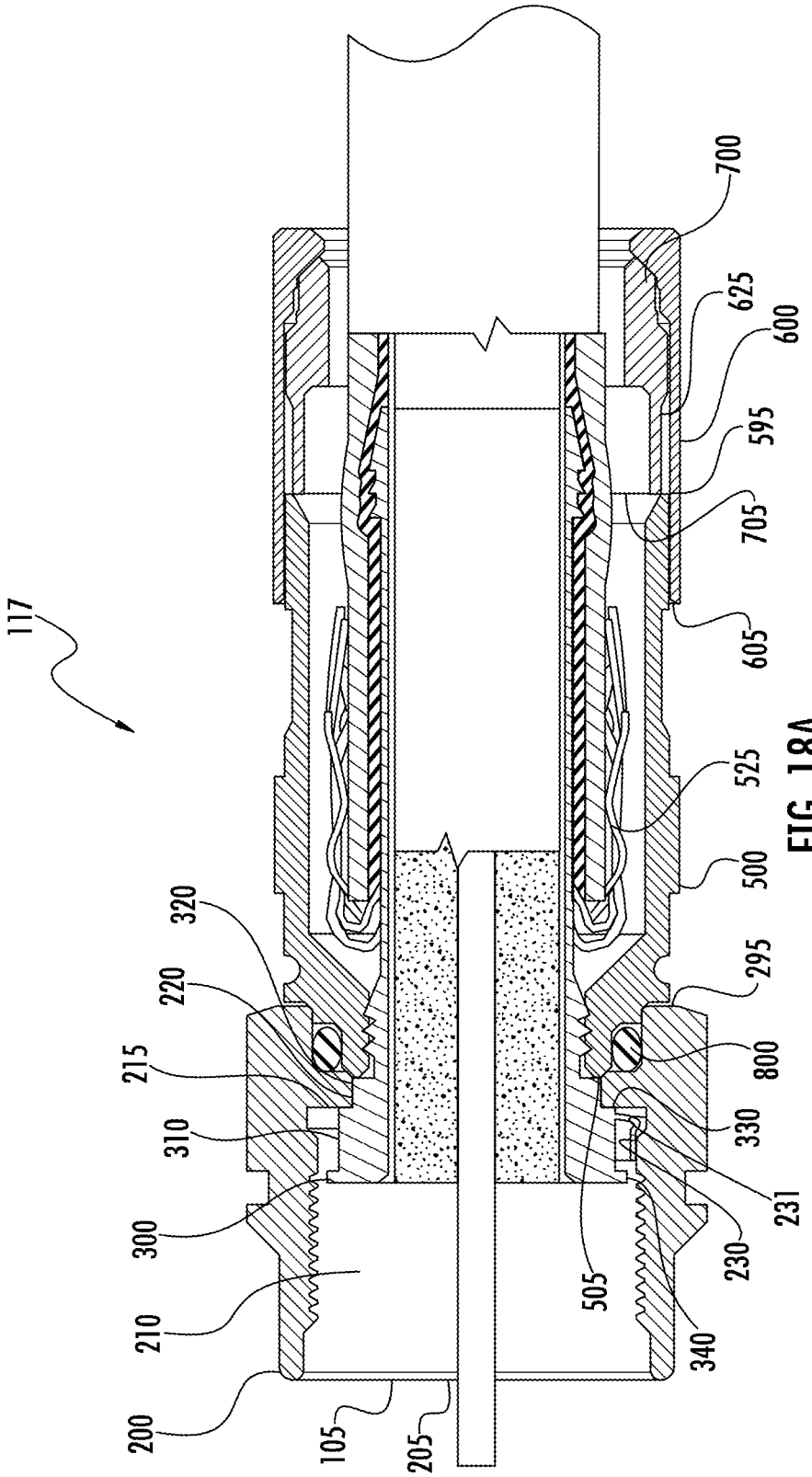
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FIG. 18A

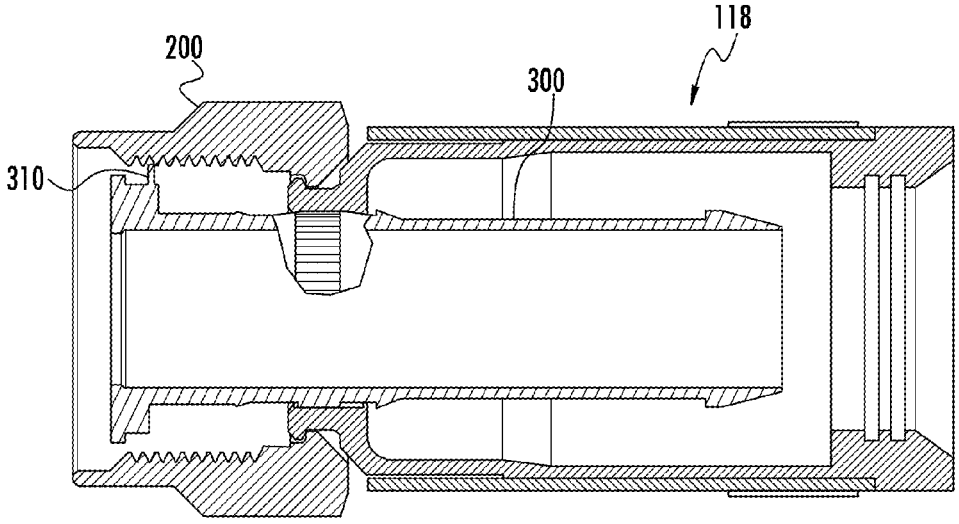

FIG. 19

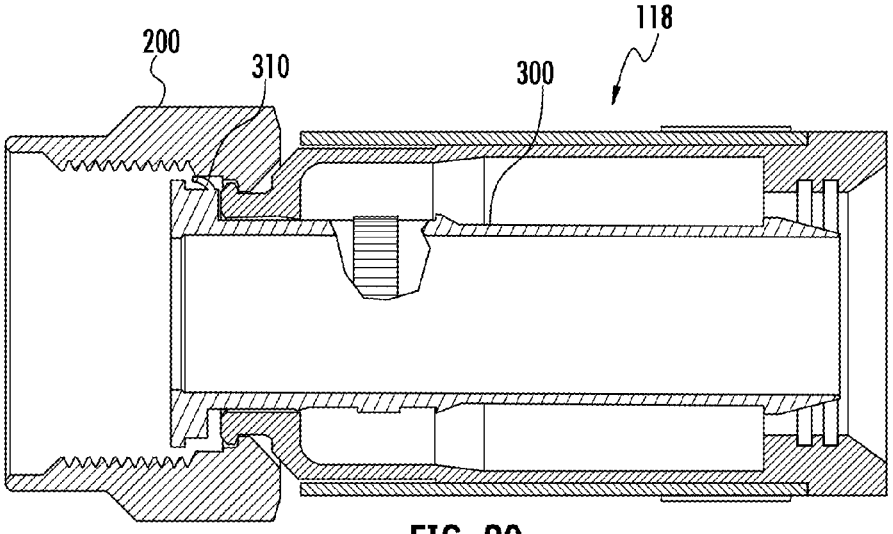

FIG. 20

COAXIAL CABLE CONNECTOR WITH INTEGRAL CONTINUITY CONTACTING PORTION

RELATED APPLICATIONS

This application claims the benefit of priority under 35 U.S.C. §119 of U.S. Provisional Application Ser. No. 61/601,821 filed on Feb. 22, 2012 the content of which is relied upon and incorporated herein by reference in its entirety.

This application is related to U.S. application Ser. No. 13/198,765, filed Aug. 5, 2011, entitled "Coaxial Cable Connector with Radio Frequency Interference and Grounding Shield", which is incorporated herein by reference in its entirety.

This application is related to U.S. application Ser. No. 13/653,095, filed Oct. 16, 2012, entitled "Coaxial Cable Connector with Integral RFI Protection," which is incorporated herein by reference in its entirety.

BACKGROUND

1. Field of the Disclosure

The disclosure relates generally to coaxial cable connectors, and particularly to a coaxial cable connector having an integral contacting portion that is monolithic with another coaxial cable connector component and provides for continuity between a coaxial cable and an appliance equipment connection port for radio frequency interference (RFI) and grounding shielding other than by a separate continuity member, regardless of the tightness of the coupling of the coaxial cable connector to the appliance equipment connection port, and without restricting the movement of the coupler of the coaxial cable connector when being attached to the appliance equipment connection.

2. Technical Background

Coaxial cable connectors, such as type F connectors, are used to attach coaxial cable to another object or appliance, e.g., a television set, DVD player, modem or other electronic communication device having a terminal adapted to engage the connector. The terminal of the appliance includes an inner conductor and a surrounding outer conductor.

Coaxial cable includes a center conductor for transmitting a signal. The center conductor is surrounded by a dielectric material, and the dielectric material is surrounded by an outer conductor. The outer conductor may be in the form of a conductive foil and/or braided sheath. The outer conductor is typically maintained at ground potential to shield the signal transmitted by the center conductor from stray noise, and to maintain a continuous, desired impedance over the signal path. The outer conductor is usually surrounded by a plastic cable jacket that electrically insulates, and mechanically protects, the outer conductor. Prior to installing a coaxial connector onto an end of the coaxial cable, the end of the coaxial cable is typically prepared by stripping off the end portion of the jacket to expose the end portion of the outer conductor. Similarly, it is common to strip off a portion of the dielectric to expose the end portion of the center conductor.

Coaxial cable connectors of the type known in the trade as "F connectors" often include a tubular post designed to slide over the dielectric material, and under the outer conductor of the coaxial cable, at the prepared end of the coaxial cable. If the outer conductor of the cable includes a braided sheath, then the exposed braided sheath is usually folded back over the cable jacket. The cable jacket and folded-back outer conductor extend generally around the outside of the tubular post and are typically received in an outer body of the connector.

The outer body of the connector is often fixedly secured to the tubular post. A coupler is typically rotatably secured around the tubular post and includes an internally-threaded region for engaging external threads formed on the outer conductor of the appliance terminal. Alternatively or additionally, the coupler may friction fit, screw and/or latch on to the outer conductor of the appliance terminal.

When connecting the end of a coaxial cable to a terminal of a television set, equipment box, modem, computer or other appliance, it is important to achieve a reliable electrical connection between the outer conductor of the coaxial cable and the outer conductor of the appliance terminal. Typically, this goal is usually achieved by ensuring that the coupler of the connector is fully tightened over the connection port of the appliance. When fully tightened, the head of the tubular post of the connector directly engages the edge of the outer conductor of the appliance port, thereby making a direct electrical ground connection between the outer conductor of the appliance port and the tubular post. The tubular post is engaged with the outer conductor of the coaxial cable.

The increased use of self-install kits provided to home owners by some CATV system operators has resulted in customer complaints due to poor picture quality in video systems and/or poor data performance in computer/internet systems. Additionally, CATV system operators have found upstream data problems induced by entrance of unwanted RF signals into their systems. Complaints of this nature result in CATV system operators having to send a technician to address the issue. Frequently, it is reported by the technician that the cause of the problem is due to a loose F connector fitting, sometimes as a result of inadequate installation of the self-install kit by the homeowner. An improperly installed or loose connector may result in poor signal transfer because there are discontinuities along the electrical path between the devices, resulting in ingress of undesired radio frequency ("RF") signals where RF energy from an external source or sources may enter the connector/cable arrangement causing a signal to noise ratio problem resulting in an unacceptable picture or data performance. Many of the current state of the art F connectors rely on intimate contact between the F male connector interface and the F female connector interface. If, for some reason, the connector interfaces are allowed to pull apart from each other, such as in the case of a loose F male coupler, an interface "gap" may result. If not otherwise protected this gap can be a point of RF ingress as previously described.

As mentioned above, the coupler is typically rotatably secured about the head of the tubular post. The head of the tubular post usually includes an enlarged shoulder, and the coupler typically includes an inwardly-directed flange for extending over and around the shoulder of the tubular post. In order not to interfere with free rotation of the coupler, manufacturers of such F-style connectors routinely make the outer diameter of the shoulder (at the head of the tubular post) of smaller dimension than the inner diameter of the central bore of the coupler. Likewise, manufacturers routinely make the inner diameter of the inwardly-directed flange of the coupler of larger dimension than the outer diameter of the non-shoulder portion of the tubular post, again to avoid interference with rotation of the coupler relative to the tubular post. In a loose connection system, wherein the coupler of the coaxial connector is not drawn tightly to the appliance port connector, an alternate ground path may fortuitously result from contact between the coupler and the tubular post, particularly if the coupler is not centered over, and axially aligned with, the tubular post. However, this alternate ground path is not stable,

and can be disrupted as a result of vibrations, movement of the appliance, movement of the cable, or the like.

Alternatively, there are some cases in which such an alternate ground path is provided by fortuitous contact between the coupler and the outer body of the coaxial connector, provided that the outer body is formed from conductive material. This alternate ground path is similarly unstable, and may be interrupted by relative movement between the appliance and the cable, or by vibrations. Moreover, this alternate ground path does not exist at all if the outer body of the coaxial connector is constructed of non-conductive material. Such unstable ground paths can give rise to intermittent failures that are costly and time-consuming to diagnose.

Coaxial cable connectors have attempted to address the above problems by incorporating a continuity member into the coaxial cable connector as a separate component. In this regard, FIG. **1** illustrates a connector **1000** in the prior art having a coupler **2000**, a separate post **3000**, a separate continuity member **4000**, and a body **5000**. In connector **1000** the separate continuity member **4000** is captured between post **3000** and body **5000** and contacts at least a portion of coupler **2000**. Coupler **2000** is preferably made of metal such as brass and plated with a conductive material such as nickel. Post **3000** is preferably made of metal such as brass and plated with a conductive material such as tin. Separate conductive member **4000** is preferably made of metal such as phosphor bronze and plated with a conductive material such as tin. Body **5000** is preferably made of metal such as brass and plated with a conductive material such as nickel.

SUMMARY OF THE DETAILED DESCRIPTION

Embodiments disclosed herein include a coaxial cable connector for coupling an end of a coaxial cable to a terminal. The connector has a coupler adapted to couple the connector to a terminal, a body assembled with the coupler and a post assembled with the coupler and the body. The post is adapted to receive an end of a coaxial cable. The coupler, the body or the post has an integral contacting portion. The contacting portion is monolithic with at least a portion of at least one of the coupler, the body, and the post. When the connector is coupled to the terminal and a coaxial cable is received by the body, the contacting portion provides for electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal regardless of the tightness of the coupling of the connector to the terminal. Electrical continuity means a DC contact resistance from the outer conductor of the coaxial cable to the equipment port through the connector of less than about 3000 milliohms. Additionally, electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal may be provided other than by a separate continuity component. The contacting portion is constructed of a material having an elastic/plastic property allowing it to maintain electrical and mechanical contact notwithstanding any interstice between components of the connector when assembled. The contacting portion is formable and forms to a contour of at least one of the body and the coupler when the body at least partially assembles with the coupler. The contacting portion may form to at least a partially arcuate shape.

In yet another aspect, embodiments disclosed herein include a coaxial cable connector having a coupler having a central bore and adapted to couple the connector to a terminal, a body having a central passage assembled with the coupler, and a post assembled with the coupler and the body. The post is disposed at least partially within the central passage of the body and at least partially within the central bore of the coupler. The body and the post are adapted to receive an end of a coaxial cable. The post has a contacting portion that provides for uninterrupted electrical continuity from an outer conductor of the coaxial cable received by the body and the post through the connector to the terminal coupled by the coupler regardless of the tightness of the coupling of the connector to the terminal. Electrical continuity means a DC contact resistance from the outer conductor of the coaxial cable to the equipment port through the connector of less than about 3000 milliohms. The contacting portion is constructed from a single piece of material with a portion of the post. The contacting portion is constructed of a material having an elastic/plastic property allowing it to maintain electrical and mechanical contact notwithstanding any interstice between components of the connector when assembled. The contacting portion is formable and forms to a contour of at least one of the body and the coupler when the post at least partially assembles with one of the body and the coupler. The contacting portion may form to at least a partially arcuate shape. The contacting portion may be a protrusion and may be radially projecting. Additionally or alternatively, the contacting portion may have a multi-cornered configuration. The contacting portion may form in response to a forming tool. The contacting portion may be segmented

In yet another aspect, embodiments disclosed herein include a method of providing uninterrupted continuity in a coaxial cable connector. The method includes providing components of a coaxial cable connector. At least one of the components has a formable continuity portion which is monolithic with the at least one of the components. The method also includes assembling the components to provide a coaxial cable connector. The assembling forms the electrical continuity portion to a contour of one of the other components. The components may be comprised from the group consisting of a coupler, a body, and a post. Electrical continuity means a DC contact resistance from the outer conductor of the coaxial cable to the equipment port through the connector of less than about 3000 milliohms. The method further includes receiving by one of the components a coaxial cable, and coupling by one of the components the coaxial cable connector to a terminal. The contacting portion provides for continuity from an outer conductor of the coaxial cable through the connector to the terminal other than by a separate component, and is regardless of the tightness of the coupling of the connector to the terminal. The contacting portion is constructed of a material having an elastic/plastic property allowing it to maintain electrical and mechanical contact notwithstanding any interstice between components when assembled.

In yet another aspect, embodiments disclosed herein include a coaxial cable connector for coupling an end of a coaxial cable to a terminal. The connector has a coupler adapted to couple the connector to a terminal and a body assembled with the coupler and adapted to receive an end of a coaxial cable. The coupler or the body has an integral contacting portion. The contacting portion is constructed from, and wherein the contacting portion is monolithic with at least a portion of at least one of the coupler and the body or a portion thereof. When the connector is coupled to the terminal and a coaxial cable is received by the body, the contacting portion provides for continuity from an outer conductor of the coaxial cable through the connector to the terminal other than by a separate component and regardless of the tightness of the coupling of the connector to the terminal. Electrical continuity means a DC contact resistance from the outer conductor of the coaxial cable to the equipment port through the connector of less than about 3000 milliohms. The contacting portion is

constructed of a material having an elastic/plastic property allowing it to maintain electrical and mechanical contact notwithstanding any interstice between components of the connector when assembled. The contacting portion is formable and forms to a contour of at least one of the body and the coupler when the body at least partially assembles with the coupler. The contacting portion may form to at least a partially arcuate shape.

Additional features and advantages are set out in the detailed description which follows, and in part will be readily apparent to those skilled in the art from that description or recognized by practicing the embodiments as described herein, including the detailed description, the claims, as well as the appended drawings.

It is to be understood that both the foregoing general description and the following detailed description are merely exemplary, and are intended to provide an overview or framework to understanding the nature and character of the claims. The accompanying drawings are included to provide a further understanding, and are incorporated in and constitute a part of this specification. The drawings illustrate one or more embodiment(s), and together with the description serve to explain principles and operation of the various embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a side cross sectional view of a coaxial cable connector in the prior art;

FIG. **2** is a side, cross sectional view of an exemplary embodiment of a coaxial connector comprising a post with a contacting portion providing an integral RFI and grounding shield;

FIG. **3**A is side, cross-sectional view of the coaxial cable connector of FIG. **2** in a state of partial assembly;

FIG. **3**B is a partial, cross-sectional detail view of the post of the coaxial cable connector of FIG. **2** in a state of further assembly than as illustrated in FIG. **3**A, and illustrating the contacting portion of the post beginning to form to a contour of the coupler;

FIG. **3**C is a partial, cross-sectional detail view of the post of the coaxial cable connector of FIG. **2** in a state of further assembly than as illustrated in FIGS. **3**A and **3**B, and illustrating the contacting portion of the post continuing to form to a contour of the coupler;

FIG. **3**D is a partial, cross-sectional detail view of the post of the coaxial cable connector of FIG. **2** in a state of further assembly than as illustrated in FIGS. **3**A, **3**B and **3**C and illustrating the contacting portion of the post forming to a contour of the coupler;

FIG. **4**A is a partial, cross-sectional view of the post of the coaxial cable connector of FIG. **2** in which the post is partially inserted into a forming tool;

FIG. **4**B is a partial, cross-sectional detail view of the post of the coaxial cable connector of FIG. **2** in which the post is inserted into the forming tool further than as illustrated in FIG. **4**A using a forming tool and illustrating the contacting portion of the post beginning to form to a contour of the forming tool;

FIG. **4**C is a partial cross-sectional detail view of the post of the coaxial cable connector of FIG. **2** in which the post is inserted into the forming tool further than as illustrated in FIGS. **4**A and **4**B illustrating the contacting portion of the post continuing to form to the contour of the forming tool;

FIG. **4**D is a partial cross-sectional detail view of the post of the coaxial cable connector of FIG. **2** in which the post is fully inserted into the forming tool and illustrating the contacting portion of the post forming to the contour of the forming tool;

FIGS. **5**A through **5**H are front and side schematic views of exemplary embodiments of the contacting portions of the post;

FIG. **6** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector comprising an integral pin, in the state of assembly with body having a contacting portion forming to a contour of the coupler;

FIG. **6**A is a cross-sectional view of the coaxial cable connector illustrated in FIG. **6** in a partial state of assembly illustrating the contacting portion of the body and adapted to form to a contour of the coupler;

FIG. **7** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector comprising an integral pin, wherein the coupler rotates about a body instead of a post and the contacting portion is part of a component press fit into the body and forming to a contour of the coupler;

FIG. **8** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector in a partial state of assembly and comprising an integral pin, wherein the coupler rotates about a body instead of a post and the contacting portion is part of a component press position in the body and forming to a contour of the coupler;

FIG. **8**A is a front and side detail view of the component having the contacting portion of the coaxial cable connector of FIG. **8**;

FIG. **9** is a cross sectional view of an exemplary embodiment of a coaxial cable connector comprising a post-less configuration, and a body having a contacting portion forming to a contour of the coupler;

FIG. **10** is a cross sectional view of an exemplary embodiment of a coaxial cable connector comprising a hex crimp body and a post having a contacting portion forming to a contour of the coupler;

FIG. **11** is an isometric, schematic view of the post of the coaxial cable connector of FIG. **2** wherein the post has a contacting portion in a formed state;

FIG. **12** is an isometric, cross-sectional view of the post and the coupler of the coaxial cable connector of FIG. **2** illustrating the contacting portion of the post forming to a contour of the coupler;

FIG. **13** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector having a coupler with a contacting portion forming to a contour of the post;

FIG. **14** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector having a post with a contacting portion forming to a contour of the coupler;

FIG. **15** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector having a post with a contacting portion forming to a contour behind a lip in the coupler toward the rear of the coaxial cable connector;

FIG. **16** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector having a post with a contacting portion forming to a contour behind a lip in the coupler toward the rear of the coaxial cable connector;

FIG. **17** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector having a body with a contacting portion forming to a contour behind a lip in the coupler toward the rear of the coaxial cable connector;

FIG. **18** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector having a post with a contacting portion forming to a contour of a coupler with an undercut;

FIG. **18**A is a partial, cross-sectional view of an exemplary embodiment of a coaxial cable connector having a post with

a contacting portion forming to a contour of a coupler with an undercut having a prepared coaxial cable inserted in the coaxial cable connector;

FIG. **19** is a partial, cross-sectional view of an exemplary embodiment of a coaxial cable connector having a moveable post with a contacting portion wherein the post is in a forward position; and

FIG. **20** is a partial cross sectional view of the coaxial cable connector of FIG. **19** with the movable post in a rearward position and the contacting portion of the movable post forming to a contour of the coupler.

DETAILED DESCRIPTION

Reference will now be made in detail to the embodiments, examples of which are illustrated in the accompanying drawings, in which some, but not all embodiments are shown. Indeed, the concepts may be embodied in many different forms and should not be construed as limiting herein. Rather, these embodiments are provided so that this disclosure will satisfy applicable legal requirements. Whenever possible, like reference numbers will be used to refer to like components or parts.

Coaxial cable connectors are used to couple a prepared end of a coaxial cable to a threaded female equipment connection port of an appliance. The coaxial cable connector may have a post, a moveable post or be postless. In each case though, in addition to providing an electrical and mechanical connection between the conductor of the coaxial connector and the conductor of the female equipment connection port, the coaxial cable connector provides a ground path from an outer conductor of the coaxial cable to the equipment connection port. The outer conductor may be, as examples, a conductive foil or a braided sheath. Maintaining a stable ground path protects against the ingress of undesired radio frequency ("RF") signals which may degrade performance of the appliance. This is especially applicable when the coaxial cable connector is not fully tightened to the equipment connection port, either due to not being tightened upon initial installation or due to becoming loose after installation.

For purposes of this description, the term "forward" will be used to refer to a direction toward the portion of the coaxial cable connector that attaches to a terminal, such as an appliance equipment port. The term "rearward" will be used to refer to a direction that is toward the portion of the coaxial cable connector that receives the coaxial cable. The term "terminal" will be used to refer to any type of connection medium to which the coaxial cable connector may be coupled, as examples, an appliance equipment port, any other type of connection port, or an intermediate termination device. Additionally, for purposes herein, electrical continuity shall mean DC contact resistance from the outer conductor of the coaxial cable to the equipment port of less than about 3000 milliohms. Accordingly, a DC contact resistance of more than about 3000 milliohms shall be considered as indicating electrical discontinuity or an open in the path between the outer conductor of the coaxial cable and the equipment port.

Embodiments relate to a coaxial cable connector for coupling an end of a coaxial cable to a terminal. The connector has a coupler adapted to couple the connector to a terminal and a body assembled with the coupler and adapted to receive an end of a coaxial cable. The coaxial cable connector may also have a post. A contacting portion may be integral to one or more of the coupler, the body and/or the post. Moreover, the contacting portion may be integral with a component, that as non-limiting examples, may be one or more of the coupler, the body or the post, either individually or in combination. Additionally, the contacting portion may be of monolithic construction, being formed or constructed in a unitary fashion from a single piece of material, with that component or a portion of that component. In other words, and as a non-limiting example, if the contacting portion is of monolithic construction with the post, the contacting portion may be constructed from a single piece of material with the post or a portion of the post. Additionally, the contacting portion may have or be any shape, including shapes that may be flush or aligned with other portions of the coupler, the body, the post, or another component of the coaxial cable connector, or may protrude from the coupler, the body, the post, or another component of the coaxial cable connector.

Any portion of the coupler, body or post may be formed from any electrically conductive material, either a metal or a non-metal, provided that electrical continuity is maintained from the outer conductor of the coaxial cable through the connector to the equipment port. Further, a non-conductive material, as a non-limiting example, a polymer, with an electrically conductive coating or plating on a portion thereof may be used. Moreover, the body may be completely non-conductive, and electrical continuity from the outer conductor of the coaxial cable through the connector to the equipment port may be maintained through one or more of the other components of the coaxial cable connector.

The contacting portion may have any number of configurations, as non-limiting examples, partially or completely circular, single-cornered, or multi-cornered. When the coaxial cable connector is assembled, coupled to the terminal and a coaxial cable is received by the body, the contacting portion provides for electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal other than by a separate component and regardless of the tightness or adequacy of the coupling of the connector to the terminal. The contacting portion may, but does not have to be at least partially radially projecting. The contacting portion may be formable and form to a contour of at least one of the body and the coupler. The contacting portion may form to at least a partially arcuate shape. Additionally and/or alternatively, the contacting portion may form in response to a forming tool. Further, a lubricant or grease, in particular a conductive lubricant or grease, may be applied to the contacting portion.

Embodiments also relate to a method of providing uninterrupted electrical continuity in a coaxial cable connector. The method includes providing components of a coaxial cable connector. At least one of the components has a formable electrical continuity portion. The method also includes assembling the components to provide a coaxial cable connector. The assembling forms the electrical continuity portion to a contour of one of the other components. The components may be comprised from the group consisting of a coupler, a body, and a post. The method further includes receiving by one of the components a coaxial cable, and coupling by one of the components the coaxial cable connector to a terminal. The contacting portion provides for electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal other than by a separate component, and is regardless of the tightness or adequacy of the coupling of the connector to the terminal.

Referring now to FIG. **2**, there is illustrated an exemplary embodiment of a coaxial cable connector **100**. The coaxial cable connector **100** has a front end **105**, a back end **195**, a coupler **200**, a post **300**, a body **500**, a shell **600** and a gripping member **700**. The coupler **200** at least partially comprises a front end **205**, a back end **295**, a central passage **210**, a lip **215**

with a forward facing surface **216** and a rearward facing surface **217**, a through-bore **220** formed by the lip **215**, and a bore **230**. Coupler **200** is preferably made of metal such as brass and plated with a conductive material such as nickel. Alternately or additionally, selected surfaces of the coupler **200** may be coated with conductive or non-conductive coatings or lubricants, or a combinations thereof. Post **300**, may be tubular, at least partially comprises a front end **305**, a back end **395**, and a contacting portion **310**. In FIG. **2**, Contacting portion **310** is shown as a protrusion integrally formed and monolithic with post **300**. Contacting portion **310** may, but does not have to be, radially projecting. Post **300** may also comprise an enlarged shoulder **340**, a collar portion **320**, a through-bore **325**, a rearward facing annular surface **330**, and a barbed portion **335** proximate the back end **395**. The post **300** is preferably made of metal such as brass and plated with a conductive material such as tin. Additionally, the material, in an exemplary embodiment, may have a suitable spring characteristic permitting contacting portion **310** to be flexible, as described below. Alternately or additionally, selected surfaces of post **300** may be coated with conductive or non-conductive coatings or lubricants or a combination thereof. Contacting portion **310**, as noted above, is monolithic with post **300** and provides for electrical continuity through the connector **100** to an equipment port (not shown in FIG. **2**) to which connector **100** may be coupled. In this manner, post **300** provides for a stable ground path through the connector **100**, and, thereby, electromagnetic shielding to protect against the ingress and egress of RF signals. Body **500** at least partially comprises a front end **505**, a back end **595**, and a central passage **525**. Body **500** is preferably made of metal such as brass and plated with a conductive material such as nickel. Shell **600** at least partially comprises a front end **605**, a back end **695**, and a central passage **625**. Shell **600** is preferably made of metal such as brass and plated with a conductive material such as nickel. Gripping member **700** at least partially comprises a front end **705**, a back end **795**, and a central passage **725**. Gripping member **700** is preferably made of a suitable polymer material such as acetal or nylon. The resin can be selected from thermoplastics characterized by good fatigue life, low moisture sensitivity, high resistance to solvents and chemicals, and good electrical properties.

In FIG. **2**, coaxial cable connector **100** is shown in an unattached, uncompressed state, without a coaxial cable inserted therein. Coaxial cable connector **100** couples a prepared end of a coaxial cable to a terminal, such as a threaded female equipment appliance connection port (not shown in FIG. **2**). This will be discussed in more detail with reference to FIG. **18**A. Shell **600** slideably attaches to body **500** at back end **595** of body **500**. Coupler **200** attaches to coaxial cable connector **100** at back end **295** of coupler **200**. Coupler **200** may rotatably attach to front end **305** of post **300** while engaging body **500** by means of a press-fit. Front end **305** of post **300** positions in central passage **210** of coupler **200** and has a back end **395** which is adapted to extend into a coaxial cable. Proximate back end **395**, post **300** has a barbed portion **335** extending radially outwardly from post **300**. An enlarged shoulder **340** at front end **305** extends inside the coupler **200**. Enlarged shoulder **340** comprises a collar portion **320** and a rearward facing annular surface **330**. Collar portion **320** allows coupler **200** to rotate by means of a clearance fit with through-bore **220** of coupler **200**. Rearward facing annular surface **330** limits forward axial movement of the coupler **200** by engaging forward facing surface **216** of lip **215**. Coaxial cable connector **100** may also include a sealing ring **800** seated within coupler **200** to form a seal between coupler **200** and body **500**.

Contacting portion **310** may be monolithic with or a unitized portion of post **300**. As such, contacting portion **310** and post **300** or a portion of post **300** may be constructed from a single piece of material. The contacting portion **310** may contact coupler **200** at a position that is forward of forward facing surface **216** of lip **215**. In this way, contacting portion **310** of post **300** provides an electrically conductive path between post **300**, coupler **200** and body **500**. This enables an electrically conductive path from coaxial cable through coaxial cable connector **100** to terminal providing an electrical ground and a shield against RF ingress and egress. Contacting portion **310** is formable such that as the coaxial cable connector **100** is assembled, contacting portion **310** may form to a contour of coupler **200**. In other words, coupler **200** forms or shapes contacting portion **310** of post **300**. The forming and shaping of the contacting portion **310** may have certain elastic/plastic properties based on the material of contacting portion **310**. Contacting portion **310** deforms, upon assembly of the components of coaxial cable connector **100**, or, alternatively contacting portion **310** of post **300** may be preformed, or partially preformed to electrically contactedly fit with coupler **200** as explained in greater detail with reference to FIG. **4**A through FIG. **4**D, below. In this manner, post **300** is secured within coaxial cable connector **100**, and contacting portion **310** establishes an electrically conductive path between body **500** and coupler **200**. Further, the electrically conductive path remains established regardless of the tightness of the coaxial cable connector **100** on the terminal due to the elastic/plastic properties of contacting portion **310**. This is due to contacting portion **310** maintaining mechanical and electrical contact between components, in this case, post **300** and coupler **200**, notwithstanding the size of any interstice between the components of the coaxial cable connector **100**. In other words, contacting portion **310** is integral to and maintains the electrically conductive path established between post **300** and coupler **200** even when the coaxial cable connector **100** is loosened and/or partially disconnected from the terminal, provided there is some contact of coupler **200** with equipment port. Although coaxial connector **100** in FIG. **2** is an axial-compression type coaxial connector having a post **300**, contacting portion **310** may be integral to and monolithic with any type of coaxial cable connector and any other component of a coaxial cable connector, examples of which will be discussed herein with reference to the embodiments. However, in all such exemplary embodiments, contacting portion **310** provides for electrical continuity from an outer conductor of a coaxial cable received by coaxial cable connector **100** through coaxial cable connector **100** to a terminal, without the need for a separate component. Additionally, the contacting portion **310** provides for electrical continuity regardless of how tight or loose the coupler is to the terminal. In other words, contacting portion **310** provides for electrical continuity from the outer conductor of the coaxial cable to the terminal regardless and/or irrespective of the tightness or adequacy of the coupling of the coaxial cable connector **100** to the terminal. It is only necessary that the coupler **200** be in contact with the terminal.

Referring now to FIGS. **3**A, **3**B **3**C and **3**D, post **300** is illustrated in different states of assembly with coupler **200** and body **500**. In FIG. **3**A, post **300** is illustrated partially assembled with coupler **200** and body **500** with contacting portion **310** of post **300**, shown as a protrusion, outside and forward of coupler **200**. Contacting portion **310** may, but does not have to be, radially projecting. In FIG. **3**B, contacting portion **310** has begun to advance into coupler **200** and contacting portion **310** is beginning to form to a contour of coupler **200**. As illustrated in FIG. **3**B, contacting portion **310**

is forming to an arcuate or, at least, a partially arcuate shape. As post **300** is further advanced into coupler **200** as shown in FIG. **3**C, contacting portion **310** continues to form to the contour of coupler **200**. When assembled as shown in FIG. **3**D, contacting portion **310** is forming to the contour of coupler **200** and is contactedly engaged with bore **230** accommodating tolerance variations with bore **230**. In FIG. **3**D coupler **200** has a face portion **202** that tapers. The face portion **202** guides the contacting portion **310** to its formed state during assembly in a manner that does not compromise its structural integrity, and, thereby, its elastic/plastic property. Face portion **202** may be or have other structural features, as a non-limiting example, a curved edge, to guide the contacting portion **310**. The flexible or resilient nature of the contacting portion **310** in the formed state as described above, permits coupler **200** to be easily rotated and yet maintain a reliable electrically conductive path. It should be understood, that contacting portion **310** is formable and, as such, may exist in an unformed and a formed state based on the elastic/plastic property of the material of contacting portion **310**. As the coaxial cable connector **100** assembles contacting portion **310** transition from an unformed state to a formed state.

Referring now to FIGS. **4**A, **4**B, **4**C and **4**D the post **300** is illustrated in different states of insertion into a forming tool **900**. In FIG. **4**A, post **300** is illustrated partially inserted in forming tool **900** with contacting portion **310** of post **300** shown as a protrusion. Protrusion may, but does not have to be radially projecting. In FIG. **4**B, contacting portion **310** has begun to advance into forming tool **900**. As contacting portion **310** is advanced into forming tool **900**, contact portion **310** begins flexibly forming to a contour of the interior of forming tool **900**. As illustrated in FIG. **4**B, contacting portion **310** is forming to an arcuate or, at least, a partially arcuate shape. As post **300** is further advanced into forming tool **900** as shown in FIG. **4**C, contacting portion **310** continues forming to the contour of the interior of forming tool **900**. At a final stage of insertion as shown in FIG. **4**C contacting portion **310** is fully formed to the contour of forming tool **900**, and has experienced deformation in the forming process but retains spring or resilient characteristics based on the elastic/plastic property of the material of contacting portion **310**. Upon completion or partial completion of the forming of contacting portion **310**, post **300** is removed from forming tool **900** and may be subsequently installed in the connector **100** or other types of coaxial cable connectors. This manner of forming or shaping contacting portion **310** to the contour of forming tool **900** may be useful to aid in handling of post **300** in subsequent manufacturing processes, such as plating for example. Additionally, use of this method makes it possible to achieve various configurations of contacting portion **310** formation as illustrated in FIGS. **5**A through **5**H. FIG. **5**A is a side schematic view of an exemplary embodiment of post **300** where contacting portion **310** is a radially projecting protrusion that completely circumscribes post **300**. In this view, contacting portion **310** is formable but has not yet been formed to reflect a contour of coaxial cable connector or forming tool. FIG. **5**B is a front schematic view of the post **300** of FIG. **5**. FIG. **5**C is a side schematic view of an exemplary embodiment of post **300** where contacting portion **310** has a multi-cornered configuration. Contacting portion **310** may be a protrusion and may, but does not have to be, radially projecting. Although in FIG. **5**C contacting portion **310** is shown as tri-cornered, contacting portion **310** can have any number of corner configurations, as non-limiting examples, two, three, four, or more. In FIG. **5**C, contacting portion **310** may be formable but has not yet been formed to reflect a contour of coaxial cable connector or forming tool. FIG. **5**D is a front schematic view of post **300** of FIG. **5**C. FIG. **5**E is a side schematic view of post **300** where contacting portion **310** has a tri-cornered configuration. In this view, contacting portion **310** is shown as being formed to a shape in which contacting portion **310** cants or slants toward the front end **305** of post **300**. FIG. **5**F is a front schematic view of post **300** of FIG. **5**E. FIG. **5**G is a side schematic view of an exemplary embodiment of post **300** where contacting portion **310** has a tri-cornered configuration. In this view contacting portion **310** is formed in a manner differing from FIG. **5**E in that indentations **311** in contacting portion **310** result in a segmented or reduced arcuate shape **313**. FIG. **5**H is a front schematic view of post **300** of FIG. **5**G.

It will be apparent to those skilled in the art that contacting portion **310** as illustrated in FIGS. **2**-**5**H may be integral to and monolithic with post **300**. Additionally, contacting portion **310** may have or be any shape, including shapes that may be flush or aligned with other portions of post **300**, or may have any number of configurations, as non-limiting examples, configurations ranging from completely circular to multi-cornered geometries, and still perform its function of providing electrical continuity. Further, contacting portion **310** may be formable and formed to any shape or in any direction.

FIG. **6** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector **110** comprising an integral pin **805**, wherein coupler **200** rotates about body **500** instead of post **300** and contacting portion **510** is a protrusion from, integral to and monolithic with body **500** instead of post **300**. In this regard, contacting portion **510** may be a unitized portion of body **500**. As such, contacting portion **510** may be constructed with body **500** or a portion of body **500** from a single piece of material. Coaxial cable connector **110** is configured to accept a coaxial cable. Contacting portion **510** may be formed to a contour of coupler **200** as coupler **200** is assembled with body **500** as illustrated in FIG. **6**A. FIG. **6**A is a cross-sectional view of an exemplary embodiment of a coaxial cable connector **110** in a state of partial assembly. Contacting portion **510** has not been formed to a contour of the coupler **200**. Assembling the coupler **200** with the body **500** forms the contacting portion **510** in a rearward facing manner as opposed to a forward facing manner as is illustrated with the contacting portion **310**. However, as with contacting portion **310**, the material of contacting portion **510** has certain elastic/plastic property which, as contacting portion **510** is formed provides that contacting portion **510** will press against the contour of the coupler **200** and maintain mechanical and electrical contact with coupler **200**. Contacting portion **510** provides for electrical continuity from the outer conductor of the coaxial cable to the terminal regardless of the tightness or adequacy of the coupling of the coaxial cable connector **100** to the terminal, and regardless of the tightness of the coaxial cable connector **100** on the terminal in the same way as previously described with respect to contacting portion **310**. Additionally or alternatively, contacting portion **310** may be cantilevered or attached at only one end of a segment.

FIG. **7** is a cross-sectional view of an exemplary embodiment of a coaxial cable connector **111** comprising an integral pin **805**, and a conductive component **400**. Coupler **200** rotates about body **500** instead of about a post, which is not present in coaxial cable connector **111**. Contacting portion **410** is shown as a protrusion and may be integral to, monolithically with and radially projecting from a conductive component **400** which is press fit into body **500**. Contacting portion **410** may be a unitized portion of conductive component **400**. As such, the contacting portion **410** may be constructed from a single piece of material with conductive component

400 or a portion of conductive component 400. As with contacting portion 310, the material of contacting portion 410 has certain elastic/plastic property which, as contacting portion 410 is formed provides that contacting portion 410 will press against the contour of the coupler 200 and maintain mechanical and electrical contact with coupler 200 as conductive component 400 inserts in coupler 200 when assembling body 500 with coupler 200 as previously described.

FIG. 8 is a cross-sectional view of another exemplary embodiment of the coaxial cable connector 111 comprising an integral pin 805, and a retaining ring 402. The coupler 200 rotates about body 500 instead of a post. Contacting portion 410 may be integral with and radially projecting from a retaining ring 402 which fits into a groove formed in body 500. The contacting portion 410 may be a unitized portion of the retaining ring 402. As such, the contacting portion 410 may be constructed from a single piece of material with the retaining ring 402 or a portion of the retaining ring 402. In this regard, FIG. 8A illustrates front and side views of the retaining ring 402. In FIG. 8A, contacting portion 410 is shown as three protrusions integral with and radially projecting from retaining ring 402. As discussed above, the material of contacting portion 410 has certain elastic/plastic property which, as contacting portion 410 is formed provides that contacting portion 410 will press against the contour of the coupler 200 and maintain mechanical and electrical contact with coupler 200 as retaining ring 402 inserts in coupler 200 when assembling body 500 with coupler 200 as previously described.

It will be apparent to those skilled in the art that the contacting portion 410 as illustrated in FIGS. 6-8A may be integral to the body 500 or may be attached to or be part of another component 400, 402. Additionally, the contacting portion 410 may have or be any shape, including shapes that may be flush or aligned with other portions of the body 500 and/or another component 400, 402, or may have any number of configurations, as non-limiting examples, configurations ranging from completely circular to multi-cornered geometries.

FIG. 9 is a cross-sectional view of an embodiment of a coaxial cable connector 112 that is a compression type of connector with no post. In other words, having a post-less configuration. The coupler 200 rotates about body 500 instead of a post. The body 500 comprises contacting portion 510. The contacting portion 510 is integral with the body 500. As such, the contacting portion 510 may be constructed from a single piece of material with the body 500 or a portion of the body 500. The contacting portion 510 forms to a contour of the coupler 200 when the coupler 200 is assembled with the body 500.

FIG. 10 is a cross-sectional view of an embodiment of a coaxial cable connector 113 that is a hex-crimp type connector. The coaxial cable connector 113 comprises a coupler 200, a post 300 with a contacting portion 310 and a body 500. The contacting portion 310 is integral to and monolithic with post 300. Contacting portion 310 may be unitized with post 300. As such, contacting portion 310 may be constructed from a single piece of material with post 300 or a portion of post 300. Contacting portion 310 forms to a contour of coupler 200 when coupler 200 is assembled with body 500 and post 300. The coaxial cable connector 113 attaches to a coaxial cable by means radially compressing body 500 with a tool or tools known in the industry.

FIG. 11 is an isometric schematic view of post 300 of coaxial cable connector 100 in FIG. 2 with the contacting portion 310 formed to a position of a contour of a coupler (not shown).

FIG. 12 is an isometric cross sectional view of post 300 and coupler 200 of connector 100 in FIG. 2 illustrated assembled with the post 300. The contacting portion 310 is formed to a contour of the coupler 200.

FIG. 13 is a cross-sectional view of an embodiment of a coaxial cable connector 114 comprising a post 300 and a coupler 200 having a contacting portion 210. Contacting portion 210 is shown as an inwardly directed protrusion. Contacting portion 210 is integral to and monolithic with coupler 200 and forms to a contour of post 300 when post 300 assembles with coupler 200. Contacting portion 210 may be unitized with coupler 200. As such, contacting portion 210 may be constructed from a single piece of material with coupler 200 or a portion of coupler 200. Contacting portion 210 provides for electrical continuity from the outer conductor of the coaxial cable to the terminal regardless of the tightness or adequacy of the coupling of the coaxial cable connector 114 to the terminal, and regardless of the tightness of coaxial cable connector 114 on the terminal. Contacting portion 210 may have or be any shape, including shapes that may be flush or aligned with other portions of coupler 200, or may have and/or be formed to any number of configurations, as non-limiting examples, configurations ranging from completely circular to multi-cornered geometries.

FIGS. 14, 15 and 16 are cross-sectional views of embodiments of coaxial cable connectors 115 with a post similar to post 300 comprising a contacting portion 310 as described above such that the contacting portion 310 is shown as outwardly radially projecting, which forms to a contour of the coupler 200 at different locations of the coupler 200. Additionally, the contacting portion 310 may contact the coupler 200 rearward of the lip 215, for example as shown in FIGS. 15 and 16, which may be at the rearward facing surface 217 of the lip 215, for example as shown in FIG. 15.

FIG. 17 is a cross-sectional view of an embodiment of a coaxial cable connector 116 with a body 500 comprising a contacting portion 310, wherein the contacting portion 310 is shown as an outwardly directed protrusion from body 500 that forms to the coupler 200.

FIG. 18 is a cross-sectional view of an embodiment of a coaxial cable connector 117 having a post 300 with an integral contacting portion 310 and a coupler 200 with an undercut 231. The contacting portion 310 is shown as a protrusion that forms to the contours of coupler 200 at the position of undercut 231. FIG. 18A is a cross-sectional view of the coaxial cable connector 117 as shown in FIG. 18 having a prepared coaxial cable inserted in the coaxial cable connector 117. The body 500 and the post 300 receive the coaxial cable (FIG. 18A). The post 300 at the back end 395 is inserted between an outer conductor and a dielectric layer of the coaxial cable.

FIG. 19 is a partial, cross-sectional view of an embodiment of a coaxial cable connector 118 having a post 301 comprising an integral contacting portion 310. The movable post 301 is shown in a forward position with the contacting portion 310 not formed by a contour of the coupler 200. FIG. 20 is a partial, cross-sectional view of the coaxial cable connector 118 shown in FIG. 19 with the post 301 in a rearward position and the contacting portion 310 forming to a contour of the coupler 200.

It should be understood that while the invention has been described in detail with respect to various exemplary embodiments thereof, it should not be considered limited to such, as numerous modifications are possible without departing from the broad scope of the appended claims. It is intended that the embodiments cover the modifications and variations of the

embodiments provided they come within the scope of the appended claims and their equivalents. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

What is claimed is:

1. A coaxial cable connector for coupling an end of a coaxial cable to a terminal, the coaxial cable comprising an inner conductor, a dielectric surrounding the inner conductor, an outer conductor surrounding the dielectric, and a jacket surrounding the outer conductor, the connector comprising:

a coupler adapted to couple the connector to a terminal, the coupler comprising a lip extending into a central passage defined by the coupler;

a body assembled with the coupler, and

a post assembled with the coupler and the body, the post comprising a flange disposed at a front end of the post, wherein the post is adapted to receive an end of a coaxial cable, and

wherein at least one of the coupler and the post comprises an integral contacting portion disposed between the flange of the post and the lip of the coupler, the integral contacting portion extending between the coupler and post, and wherein the contacting portion is monolithic with at least a portion of the at least one of the coupler and the post, and wherein when the connector is coupled to the terminal and a coaxial cable is received by the body, the contacting portion provides for electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal regardless of the tightness of the coupling of the connector to the terminal.

2. The connector of claim **1**, wherein electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal is provided other than by a separate continuity component.

3. The connector of claim **1**, wherein the contacting portion is constructed of a material having an elastic/plastic property allowing it to maintain electrical and mechanical contact notwithstanding any interstice between components of the connector when assembled.

4. The connector of claim **1**, wherein the contacting portion is formable.

5. The connector of claim **4**, wherein the contacting portion forms to a contour of at least one of the coupler and the post when the post is at least partially assembled with the coupler.

6. The connector of claim **4**, wherein the contacting portion forms to a contour of at least one of the body and the post when the post is at least partially assembled with the body.

7. The connector of claim **4**, wherein the contacting portion forms to at least a partially arcuate shape.

8. The connector of claim **1**, wherein the electrical continuity means a DC contact resistance from the outer conductor of the coaxial cable to the equipment port through the connector of less than about 3000 milliohms.

9. A coaxial cable connector for coupling an end of a coaxial cable to a terminal, the coaxial cable comprising an inner conductor, a dielectric surrounding the inner conductor, an outer conductor surrounding the dielectric, and a jacket surrounding the outer conductor, the connector comprising:

a coupler having a central bore and adapted to couple the connector to a terminal; and

a body having a central passage assembled with the coupler, and

a post having a front end and a back end, the post assembled with the coupler and the body, wherein the post is disposed at least partially within the central passage of the body and at least partially within the central bore of the coupler, and wherein the body and the post are adapted to receive an end of a coaxial cable, and

wherein the post comprises a flange and an integral contacting portion disposed rearward of the flange, the integral contacting portion provides for electrical continuity from an outer conductor of the coaxial cable received by the body and the post through the connector to the terminal coupled by the coupler regardless of the tightness of the coupling of the connector to the terminal, and wherein the contacting portion is constructed from a single piece of material with at least a portion of the post.

10. The connector of claim **9**, wherein the contacting portion is constructed of a material having an elastic/plastic property allowing it to maintain electrical and mechanical contact notwithstanding any interstice between components of the connector when assembled.

11. The connector of claim **9**, wherein the contacting portion is formable.

12. The connector of claim **11** wherein the contacting portion forms based on a contour of at least one of the body and the coupler when the post at least partially assembles with one of the body and the coupler.

13. The connector of claim **11**, wherein the contacting portion forms to at least a partially arcuate shape.

14. The connector of claim **11**, wherein the contacting portion forms in response to a forming tool.

15. The connector of claim **9**, wherein the contacting portion is a protrusion.

16. The connector of claim **9**, wherein the contacting portion is radially projecting.

17. The connector of claim **9**, wherein the contacting portion has a multi-cornered configuration.

18. The connector of claim **9**, wherein the contacting portion is segmented.

19. A method of providing electrical continuity in a coaxial cable connector, comprising:

providing components of a coaxial cable connector, wherein at least one of the components has an integral, formable contacting portion protruding away from the at least one of the components toward another component, wherein the contacting portion is monolithic with the at least one of the components; and

assembling the components to provide a coaxial cable connector, wherein the assembling forms the contacting portion to a contour of the other component,

wherein the contacting portion forms in at least a partially arcuate shape.

20. The method of claim **19**, wherein the components are composed from the group consisting of a coupler, a body, and a post.

21. The method of claim **19**, further comprising:

receiving by one of the components a coaxial cable, and

coupling by one of the components the coaxial cable connector to a terminal.

22. The method of claim **19**, wherein the contacting portion provides for electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal other than by a separate component and regardless of the adequacy of the coupling of the connector to the terminal.

23. The method of claim **19**, wherein is the contacting portion is constructed of a material having an elastic/plastic property allowing it to maintain electrical and mechanical contact notwithstanding any interstice between components when assembled.

24. A coaxial cable connector for coupling an end of a coaxial cable to a terminal, the coaxial cable comprising an inner conductor, a dielectric surrounding the inner conductor,

an outer conductor surrounding the dielectric, and a jacket surrounding the outer conductor, the connector, comprising:

a coupler adapted to couple the connector to a terminal; and

a body assembled with the coupler, wherein the body is adapted to receive an end of a coaxial cable, and

wherein at least one of the coupler and the body comprises an integral contacting portion extending between the coupler and the body, and wherein the contacting portion is monolithic with at least a portion of the at least one of the coupler and the body, and

wherein when the connector is coupled to the terminal and a coaxial cable is received by the body, the contacting portion provides for electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal other than by a separate component and regardless of the tightness of the coupling of the connector to the terminal, wherein the contacting portion is formable and the contacting portion forms in at least a partially arcuate shape.

25. The connector of claim **24**, wherein the contacting portion is constructed of a material having an elastic/plastic property allowing it to maintain electrical and mechanical contact notwithstanding any interstice between components of the connector when assembled.

26. A coaxial cable connector for coupling an end of a coaxial cable to a terminal, the coaxial cable comprising an inner conductor, a dielectric surrounding the inner conductor, an outer conductor surrounding the dielectric, and a jacket surrounding the outer conductor, the connector, comprising:

a coupler adapted to couple the connector to a terminal; and

a body assembled with the coupler, wherein the body is adapted to receive an end of a coaxial cable, and

wherein at least one of the coupler and the body comprises an integral contacting portion extending between the coupler and the body, and wherein the contacting portion is monolithic with at least a portion of the at least one of the coupler and the body, and

wherein when the connector is coupled to the terminal and a coaxial cable is received by the body, the contacting portion provides for electrical continuity from an outer conductor of the coaxial cable through the connector to the terminal other than by a separate component and regardless of the tightness of the coupling of the connector to the terminal, wherein the contacting portion is formable and the contacting portion forms to a contour of at least one of the body and the coupler when the body at least partially assembles with the coupler.

27. The connector of claim **24**, further comprising a post assembled with the coupler and the body.

28. The connector of claim **24**, wherein the electrical continuity means a DC contact resistance from the outer conductor of the coaxial cable to the equipment port through the connector of less than about 3000 milliohms.

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